THE JOURNAL OF
ABNORMAL PSYCHOLOGY

AUGUST—SEPTEMBER, 1910

THE PSYCHO-ANALYSIS OF A CASE OF SENSORY AUTOMATISM

BY ISADOR H. CORIAT, M.D., BOSTON, MASS.

IN this paper a study will be made of a case through psycho-analytical methods, in order to show how the visual hallucinations which formed a prominent feature could be traced out and verified as arising from subconscious antecedents and complexes. It is well known that subconscious experiences or ideas can give rise to various types of hallucinations, as can be demonstrated in complex types of multiple personality*, or in the subconscious perceptions in certain forms of hysterical anæsthesia. In this latter condition in particular, it has been possible to prove by means of experiment, that subconscious impressions can give rise to visual hallucinations.† Under these circumstances, the hallucinations were either visual representations of subconscious ideas or the ideas formed new combinations and became so intense that they assumed an hallucinatory character. We know that conserved experiences, whether subconscious or unconscious, can lead a very active existence, and influence the entire psychophysical life. These conditions are not without their parallel in literature. For instance, in Macbeth the vision of the dagger was merely a symbolized idea, which, on

*See particularly the hallucinations from the subconscious in the case of Miss Beauchamp. (The Dissociation of a Personality — Chap. XXXI).

†Prince and Sidis. A Contribution to the Pathology of Hysteria. *Boston Med. and Surgical Journal*, June 23, 1904.

account of its intensity became transformed into a visual hallucination. An attempt will be made to show in the following case that the visual hallucinations were not accidental occurrences, but a disturbing and a directing subconscious mechanism was at work and directed their formation, and furthermore that the condition did not have any occult significance, but was merely a scrappy record from the subconscious mental life. As stated by Dr. Prince in his analysis of a similar condition in Miss Beauchamp, "The researches of recent years in abnormal psychology enable us to understand the genesis of these sensory automatisms, even if we cannot yet explain their exact psychological mechanism. In the light of this knowledge it becomes clear that they are due to the autogenetic influence of the subject's own thoughts, conscious or subconscious."

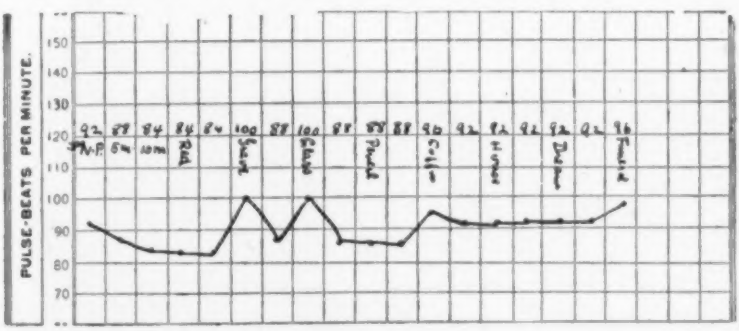
Mrs. L., age forty-six, who was referred to me by Dr. Prince, had been troubled for several years by peculiar visual hallucinations. She constantly saw coffins before her eyes: sometimes the coffins were lying near an open grave, sometimes one was open, and in it she would see a person whom she did not recognize. The visual hallucinations were localized fixedly within a certain space within the field of vision and remained in this area at all times, even following the turning of the eyeballs in various directions. It would seem from this alone that the hallucinations were of central origin. These hallucinations never left her unless her attention was strongly distracted, and then they vanished for only a few minutes at a time. They were beyond her control, she was unable to make them appear or disappear at will, except on some occasions, when they would vanish momentarily when she closed the eyes, after which they would appear again in their original intensity. The hallucinations thus seemed to be insistent and automatic. At times she had a feeling that her personality had changed. Sleep was disturbed by dreams of funerals and coffins, or of wild animals chasing her, particularly a bull. The latter dream was particularly insistent and recurrent. She was unable to explain the origin of these hallucinations or the dreams, or under what conditions they first appeared.

In this case we seem to be dealing with some form of

mental dissociation in which subconscious experiences of which the subject was not aware formed the hallucinations during the day and the dreams at night. The psycho-analysis of this case through the methods of experimental distraction, the analysis of the dream-life, the association tests, and the pulse reactions (psycho-cardiac reflex) gave most interesting results.

In experimental distraction, obtained by having the patient listen to a monotonous sound stimulus, the memory broadened, and fragments of submerged experiences were secured. In it she related a number of deaths which occurred in her family during her early childhood, and which at the time of their occurrence made a more or less prominent impression upon her. She also remembered that about four years previously, immediately before the first appearance of the hallucinations, that she was in a state of worry and exhaustion. At this time the sight of dirt disturbed her a great deal, and she was constantly cleansing things about the house. When she saw dirt, the word "grave" would flash into her mind, at first as a mere idea, then gradually becoming more and more intense until it became visualized into the object itself. Finally the word "graves" suggested the word "coffin," and this too in turn became visualized into the object.

The analysis by the pulse reaction tests gave most interesting results, as shown in the accompanying figure:



The increase in the pulse rate, as shown in the increase of the height of a curve when the test words "graves,"

"coffin," and "funeral" were used, is easily explained. The marked increase of rate at the word "glass" remained inexplicable, however, until its source was traced to the following dream. The account of this dream was obtained only through the artificial device of experimental distraction. About two years before coming under observation she dreamed that a man, dressed like a farmer, came to her front door leading two cows. These cows resembled the bulls of her other dreams. Suddenly both animals lowered their heads and struck the front door of her house, breaking the glass in the panels. This, however, was only a partial explanation of a dream which was preserved in the subconscious, and through association with one of its elements produced the change in the pulse rate. The dream of bulls had occurred a number of times in the dream life of the subject. What, then, was the origin of this particular recurrent and insistent dream? Through the method of experimental distraction the following dormant experiences were clearly obtained as probably forming their origin. Just previous to the occurrence of this particular dream she remembered having read an account in a local newspaper of a young boy who was gored to death by a young bull while he was leading the animal to pasture. At the time she read this story it had a most horrifying effect upon her, particularly since at the same time she was suffering from the visual hallucinations. The psycho-cardiac reflex had thus become a delicate index of stored up emotional complexes.* Attempts at automatic writing and the production of crystal visions gave negative results.

The association tests threw considerable light upon the complexes which were responsible for the hallucinations and dreams. A group of experiences had left their traces upon the nervous system and produced disturbances in the mechanism of association, either lengthened reaction time, automatic repetition of the test word, peculiar abnormal reactions to the test word, or the inhibition of thought was sometimes so marked that no reaction at all took place. The

*Isador H. Coriat. Certain Pulse Reactions as a Measure of the Emotions. JOURNAL ABNORMAL PSYCHOLOGY, Vol. IV, No. 4, 1909.

associations thus laid bare the hidden and dormant mental undercurrents, and showed how these undercurrents distorted the subject's thoughts and influenced her entire mental life.

Association Tests

No.	Test word	Reaction word	Reaction time	Reproduction
1.	White	Cloth	1.	Cloth (2.)
2.	Storm	Trouble	2.	Rain (2.2)
3.	Grave	Funeral-dirt	2.2	Cemetery (3.2)
4.	Sky	Blue	1.6	Pretty (2.4)
5.	Red	Plush	1.2	Book (15.)
6.	Glass	Window	2.4	Window (3.)
7.	Coffin	Trouble	3.2	Itself (5.4)
8.	Sleep	Rest	5.8	Rest (2.4)
9.	Car	Street	1.4	Steam (3.2)
10.	Sweet	Candy	2.	Candy (3.)
11.	Funeral	Sadness	2.2	Funeral (6.)
12.	Book	Bible	6.	No reaction (7.)
13.	Ring	Diamond	2.	(No reaction (2.)
14.	Dream	Unpleasantness	3.2	Unpleasantness (6.8)
15.	Gold	Watch	6.2	(No reaction (6.8)
16.	Lady	Friend	2.8	A number (5.2)
17.	River	Water	3.	
18.	Bull	Bull	4.4	Bull (4.8)
19.	Ink	Dark	2.2	Dark (1.2)
20.	Top	Spin	2.2	Top (4.2)
21.	Chair	Common	3.	(No reaction (4.2)
22.	Animal	Dog	2.6	Dog (8.4)

Analysis of the Associations

3. The association here is clear, and relates definitely to the hallucinations.

5. The association " red — plush " was short, but on the reproduction it took fifteen seconds before the word "book" was brought forth. This was explained by the fact that since the hallucinations first appeared, bright colors had become very distasteful to the subject. She preferred black.

6. The word " glass " brought forth merely a monotonous repetition of " window," without any lengthening of the reaction time. Here the complex was so deeply buried in the subconscious that it did not cause any mental inhibition in the association tests, and was only revealed by means of the artificial device of deep abstraction. The same test word, however, caused a marked physiological reaction, as shown by the psycho-cardiac reflex. This peculiarity, that test words caused no mental retardation when relating to conserved experiences of which the subject was not aware, but that these same test words could cause changes in the pulse rate, was also found to occur in the psycho-analysis of a case of hysteria.†

7. In the reproduction, the inhibition caused not only a monotonous repetition, but also a delayed reaction time.

8. The reaction word, " rest," in both cases is explained by the fact that the subject has been so troubled by the hallucinations that she had thought of suicide.

11. The association, the retardation, and the reproduction are clear.

12. The retardation, the lack of reaction in the reproduction and the reaction word, " Bible," are due to the reminiscence of the reproduction " book " in the association group 5; while the long reaction time in both cases is probably a carrying over of the inhibition from the association group 11.

14. The long reaction time and the monotonous repetition of the reaction word are clear.

15. The long reaction time in both cases and the lack of reaction word in the reproduction are inhibitions carried over from the previous association.

17. The subject had often thought of drowning herself in a nearby river.

†Isador H. Coriat. Abnormal Psychology, 1910, pp. 163–173

18. The monotonous repetitions of the test word are marked. This is due to the powerful disturbing emotional complex, relating to dreams.

As a result of these analyses, the origin of the hallucinations from the subconscious complexes now becomes clearer. At the time of their origin the subject was in a state of fatigue, and this induced a partial mental disintegration. Then a fear of dirt arose, and following this a certain abnormal association of ideas which gradually became more intense, until they changed into persistent hallucinations. Exactly how these ideas transformed themselves into the sensory automatisms it is impossible to state. The dreams were also of the nature of distorted subconscious memories. Neither the hallucinations nor the dreams were due to chance, but a disturbing mechanism was at work in the subject's subconscious mental life, that is, the autogenetic influence of the subject's own thoughts, previously referred to. Like crystal visions, which are really artificially reproduced hallucinations, the presistent visions of coffins were an evidence of a partial mental dissociation.

REPORT OF A CASE OF HYSTERIA

Lyssophobia. First Crisis Following a Dog Bite

BY HENRY W. MILLER, M. D.

Clinical Director, Government Hospital for the Insane, Washington, D. C.

THE following case of hysteria is presented not for the purpose of supporting or controverting any of the present theories regarding hysteria, but rather because the case presents certain unique features to which I wish to draw attention.

Synopsis.— R. M. W., male, eighteen years of age, is said to have developed normally, with the exception of a unilateral amaurosis (right) which was detected before the first hysterical crisis. At the age of twelve he was bitten on the right leg by a dog. The symptoms of hydrophobia were suggested in a previous experience by his neurotic mother's impolitic actions, and by the remarks of his playmates. Fourteen days after the injury, and while chafing under a reprimand from his school teacher, he had a very brief amnesia-like period, followed by a convulsive attack, and then again another period of amnesia, during which he manifested hydrophobia-like symptoms. For six years he has had, with considerable regularity (semi-annually, in January, and during the heated months — dog days) peculiar motor and psychic attacks similar to the first attack. During these periods he has had four times a right hemiplegia with hemi-anæsthesia and once a paraplegia with mutism. He has had many trance-like conditions and brief periods of amnesia, with and without convulsive movements. He was committed to the Government Hospital for the Insane during a dream-like state in a condition of excitement. In four days he came to himself, and showed only the stable mental stigmata. On the physical side were characteristic stigmata of hysteria. Suggestion and a readjustment of the patient and his mother's viewpoint have resulted in freedom from motor or psychic attacks for one year.

Family history.— In brief it is as follows: Father was drowned at the age of thirty-five; was not an alcoholic, was not regarded as in any way nervous, and always enjoyed good mental and physical health. Mother living, aged thirty-nine; looks prematurely aged. She is of a neurotic temperament, and a little given to spectacular religious emotionalism. Her peculiar temperament is further analyzed under the personal history of the patient. There is nothing further of importance in the family history.

Personal data.— Patient was born May 29, 1890; birth was normal; healthy as a child, and had no infectious diseases but measles. He attended school until he reached the age of twelve; advanced to the sixth grade, was bright and capable; was regarded by the mother as a typical boy, fond of play, associated normally with other children, and showed no nervous tendencies before the age of twelve. This latter observation, however, requires confirmation by an unprejudiced observer.

Development of Hysterical Symptoms.—On October 23, 1902, when the patient was twelve years of age, he was bitten on the calf of the right leg by a dog. He was taken to the Emergency Hospital in Washington, treated, and sent home. He apparently did not worry about the bite, and laughingly told his mother of the accident. The mother thinks the patient knew nothing about hydrophobia. She was very much worried about the bite, although it healed by first intention, and there were no unusual local manifestations except a possible slight swelling. The mother knew the dog showed no symptoms of hydrophobia, but she also knew that healthy dogs harbor rabies infection. She learned that the dog, a small terrier, belonged to a physician, and she made demands that it be exterminated. This was not done; she entered action in court against the physician, and being defeated appealed the case. There were further legal complications which the mother does not fully understand. At any rate the dog was not killed, and this fact seemed to accentuate her fears of rabies in her boy. She convinced herself that the dog did not develop hydrophobia within the ordinary period of incubation. However, she claims she has observed the acts of her son, has observed the hair grow

longer and thicker upon his legs, has seen his dog-like actions during his attacks, until she has bcome thoroughly convinced that the boy has been taking on an animal nature. This attitude of the mother is of interest as showing her peculiar makeup, and more particularly in consideration of the effect such an attitude would have upon an impressionable child.

On November 6, 1902, fourteen days following the bite, the patient had a convulsion. The day previous he had attended school and had been reprimanded by the teacher for some trivial misdemeanor. The teacher reported to the mother that he did not seem quite as well as usual. Upon going up the steps to the school he seemed dazed, did not apparently know what he was doing or where he was going, and wandered blindly into the girls' cloak room. When he returned from school his condition was not such as to attract his mother's attention, but that night she thought she had a forewarning, and decided to sit beside his bed. He slept until midnight, and then awoke making a peculiar noise. He finally developed convulsions, which were general. He frothed at the mouth, had violent twitchings of all the muscles. There was no involuntary passage of urine or feces; he had no preliminary vomiting. The mother thinks he was unconscious during part of the time, but is not certain. The physician who was called in in the night pronounced it hydrophobia, and gave him, according to the mother, a powerful hypodermic. From subsequent developments she was convinced that the hypodermic had driven the poison of the rabies throughout the boy's system. The next day he was weak and dazed, and the mother, to see if it actually was hydrophobia, tried him with bringing water to him. Each time she brought the water before him he would become rigid, draw back, and have a look of horror on his face. He did not, however, lose consciousness. Every time he saw water that day he had these attacks, associated with rigidity and an expression of horror. The second day he had three convulsions, and the mother says the following day he was wild, running about on his hands and feet, crawling under the bed, and looking at her in a peculiar dog-like fashion, but not attempting to bite her. Since that time the mother

believes he has not been natural, and presented evidences which confirm her suspicions that he was becoming like an animal. He has had convulsions about every six months since that time, with occasional mild attacks in the interim. The idea of the periodicity of the convulsions had been conceived by the mother, evidently, on account of a popular conception that in hydrophobia the attacks occur with certain definite regularity. She always looked for them in January and July or August, and they nearly always appeared at that time.

It is interesting to note, whereas the mother stoutly maintains that she concealed her anxiety from her boy, she cites an occasion when she had two medical students examining the boy's saliva; and that, while doing so one of the students said in an impressive way, before the patient, " This boy must have been bitten by a dog." She, to impress upon the physician her ingenuity, says she replied, " Yes, I presume he has been bitten by a mosquito."

It is hard to ascertain the exact number of convulsions the patient has had. He has had paralysis following upon convulsions four times; three times a right-sided hemiplegia, and once a paraplegia. His paraplegic attack came on following convulsions in August, 1908. During that time he was unable to move, could not speak, seemed at times able to roll his torso a little, but never attempted to move his extremities. The hemiplegia was always on the right side. He never had a loss of speech with the right-sided hemiplegia. A condition of stupor or confusion, with sometimes excitement, continued three or four days after these attacks. In many of the attacks he has been " wild at the sight of water," ran about on his hands and feet, and his mother claims he acted very much like a dog; but it was not always the sight of water which precipitated the attack, although it occasionally did so. In one of his attacks of hemiplegia his mother tested him by pricking his right hand, arm, and leg with a needle; he did not show the least sign that he felt it, while he reacted on the other side. At one time, when his arm was paralyzed, he burned his finger, but did not pay as much attention to it as he commonly would to a burn. He did not say it pained him.

His mother noticed nothing peculiar about the patient's eye previous to the first convulsion. The history given by

the school teacher would indicate that he had some trouble with the eye the day previous to the convulsion, and the statements made by the patient would confirm this. His right eye has not been normal since the first attack. During a convulsion in 1908 he was for two days blind in both eyes. He has frequently said, at the beginning of an attack, that his eye was jumping, and would put his hand over it. At the time the blindness was first noted in the eye it was also noted that he had an internal squint. From the history this seems to have been gradual. He was taken to a physician, who prescribed glasses, but without effect. He was later taken to another ophthalmologist, who examined the eye, and said he must have been blind in that eye from birth, but could find nothing wrong with the eye ground.

According to the mother's history, his memory is not always clear as to his motor attacks. When he comes to he always has difficulty in collecting himself, though he has spoken of some of the events which have occurred, and there seems to be no definite line of experiences obliterated from his memory during earlier attacks. His loss of memory is always associated with motor attacks. He has had no periods of prolonged sleep. He has frequently told his mother that he was afraid of the attacks coming on. Then he felt as if everything was becoming a blank to him. The condition following the convulsive attacks has, on the whole, been similar. Shortly before August, 1908, he was seen by a physician, who told him that his condition was the result of Meniére's disease. The attack following this consultation was associated with earache, and prior to the convulsion he felt as if something had burst in his head, following intense pain in his ear. He was taken to the Emergency Hospital, and shortly afterwards was sent home. He returned to work and had another convulsion. For two weeks following this he was paralyzed in his right side. During this period he could not retain his food; vomited whenever food was given to him, and it was at this time that he lost the sight in both eyes.

Present attack.— The attack which led to his commitment to the Government Hospital for the Insane commenced on Tuesday, February 16, 1909. At the time he was working in a newspaper office in charge of the delivery boys. He felt badly that day, and the following day said he could not

work; claimed that he felt numb, and as if he were going to have an attack. That night he had a convulsion. For three days he was in a stupor, but was not, however, in a rigid position; he breathed heavily, had profuse perspiration, so that the sheets on his bed had to be changed three or four times a day. He did not lose control of bladder or bowels during this stupor, did not eat, did not speak. On the 19th of February he was sent to the General Hospital. At the time he was taken there he was crying bitterly; said he wanted to go home to God; became very much excited. He was given sedatives. On February 22d he became much disturbed, said he was in heaven and wanted to be with God; looked about in a wild, staring manner. Two days later he was admitted to the Government Hospital for the Insane.

The mother says she has consulted various physicians, Christian Scientists, faith healers, irregular psychotherapeutists, and has had him in three of the general hospitals of the city; but claims that the physicians were always evasive in their diagnoses. She was given such opinions as "it was a very peculiar case," epilepsy, Meniére's disease, nervous hydrophobia, etc. She was convinced throughout that it was dependent upon the hydrophobia, and read copiously of the literature on hydrophobia, particularly during the early part of her son's illness.

Physical examination outside of the nervous system is negative.

Neurological examination.— Motor symptoms: Co-ordination good; no swaying; co-ordination in hands and legs equally good; flexor and extensor strength good. General muscular strength excellent.

Attitude erect.

Gait normal, except that sometimes defective, owing to defective eyesight.

Paralysis: None at present; no paresis; facial musculature equally innervated. No contractures; no tremors.

Deep reflexes: *Both knee reflexes sharp*, the left more so than the right. No knee clonus. Tendo-achilles, both present, equally sharp. Triceps, both present, equal; wrist negative; no ankle clonus; no jaw jerk. Corneal anæsthesia; *pharyngeal reflexes diminished greatly. Cremasteric* present on right, *absent on left.* Epigastric reflex

and abdominal more marked on left. Plantar flexion on both sides on stimulation of sole of foot.

Dermatographia slight, fades rather quickly.

Pupils equal, regular in outline; slightly *dilated*. Come down quickly to light directly and consensually. No paralysis of accommodation; *internal strabismus of right eye;* occasionally internal strabismus in the left eye. *Right unilateral amaurosis; concentric limitation of both visual fields; partial dyschromatopsia* in right eye. No disturbance of other reflexes. No vertigo or pain.

Taste acute; smell normal; hearing, watch heard at normal distance; *tactile sense very acute without any well-defined hyperæsthetic areas.* Temperature sense, slight modifications of heat and cold quickly recognized at any part or surface of the body. Pain sense, normally acute on left side. *Moderate hypalgesia on back of thigh and calf of right leg;* no areas of complete anæsthesia. No paræsthesia in present state; no alloæsthesia. Muscle sense intact. Stereognostic sense not impaired. No suggestive speech disorder but he has a *lisp* which is scarcely noticeable.

Color fields : *Right.*— Above shows field for white. Blue almost central. Blindness for red. Red recognized as white each time. *Left.*— Above chart shows field for white. Field for red and blue almost central.

Hospital records.— I will describe but briefly his condition while in the hospital. For four days he remained in a dreamy state with periods of excitement, which condition was finally controlled by hypnosis. Upon admission his temperature was somewhat elevated, tongue coated, face flushed. This appeared to be due to the fact that he had not eaten for a week. During the excitement he was laughing and crying alternately, shouting that he was going to die, that he was dead, that he was the Lord Jesus Christ, and that he was the devil. This condition existed from the 16th of February until 28th. When he came to himself he spoke of being in a trance, recalled a few isolated occurrences, such as coming in the ambulance, the arrangement of the beds on the ward of the General Hospital, and he had a faint recollection of having seen the physician before. He related what he called a dream, as follows:

" I saw myself go up through the air, and then I was

going through water; then a pirate came along and gave me something to drink. I was going up like a star; the sun and the stars were shining, but darkness was all over the world. I thought every one was looking at me going up alive, and I seemed to be going through water and clouds and stars. Then the ambulance came after me. It seemed like I could see myself going. I could see myself in the center of a crowd; I had five people along, like five disciples, with me. Finally I heard the voice of the Lord say, 'Don't worry, I will pass you through all right. You need not worry.'"

His recollection of the whole period from the 16th of February to the 28th was as follows:

"I remember working on the 16th and leaving the office with the intention of going home. It strikes me that I had an attack of some kind on the street. I don't know what made me think that, whether it was a dream or imagination, but I got the idea somehow, and it seemed I was in a hospital, and I thought I was getting near the end of the world. It seemed to be in a little house at the end of a trolley line; they seemed to be pulling the overhead wires together, and it seemed as if the world was coming to an end, and everything was being squeezed into a small space. The house began to raise up, and all the world was coming together. I thought people were trying to reach me as I was up in the air. Then there was nothing but ice, and I could see large hills of ice, and I was in the air looking about. Two men who looked like villains were after me; seemed as if they wanted to kill me, but I was traveling through the air faster than they were. Then I saw a star; I thought it was the star of Bethlehem, and it seemed as if I could hear lightning strike. Then I went through the stars and saw the face of the Saviour. I had not quite gotten to the star when I was awakened, and I thought I was here in this ward. I went to sleep again, and when I awoke thought it was the Child's Hospital. It seemed as if the hospital was on the water, and that my father was going to murder my mother, and was trying to drag her into the water. I wanted all the people to go up to heaven with me, so I got them to sit with me on the bed, and the bed raised through the air."

He was questioned in detail as to happenings which had occurred, but he had only a faint recollection of the im-

portant happenings, and could not place anything in sequence. The most striking thing he remembered was being in an ambulance which brought him to this hospital.

After February 28th he remained clear. Under hypnosis he recalled many of his delirious experiences, but there were many discrepancies which I will not here attempt to analyze. It is interesting to compare the patient's version of the onset with the mother's statements.

He states that at the time he was bitten by the dog he was very much frightened and afraid that he was going to go mad, because it happened in dog days, and he had heard his mother and other people talking about dogs going mad in the fall. He had also seen two dogs shot that summer, and these things made quite an impression on him at the time. He doesn't recall any previous or similar fright, nor does he recall any emotional shock prior to that time. When he returned to school after having been treated at the hospital for dog bite, the boys teased him, and told him that he was going mad. Several times each day they made such remarks as, " Look out, he is going to bite you, he is going to go mad." In school, the day before the first convulsion, he missed ten words in spelling, which was something unusual for him; and the teacher told him that night that he would have to write each misspelled word one hundred times. This he claimed worried him.

March, 1910.— The patient has been discharged from the hospital for one year, and has been working and supporting himself and his wife. He has visited the writer at stated intervals, and only once during the past year has he had any trouble, which was a slight feeling of dizziness while standing on a ladder.

The supposition that the mother's viewpoint had been readjusted was rather dissipated by a newspaper clipping which was received from her, in which a similar case was described and designated as hydrophobia. The mother's comment was, " I told you there were such cases of hydrophobia." For the greater part of the past year the patient has not been in close contact with his mother, fortunately.

A PROPOS OF DR. MILLER'S CASE OF LYSSOPHOBIA

BY TOM A. WILLIAMS, M.B. C.M., EDIN., WASHINGTON, D. C.

Corresponding Member of the Society of Neurology and of Society of Psychology of Paris. Neurologist to Epiphany Dispensary.

THIS admirably reported case seems to me most demonstrative with regard to the ideas of Babinski on hysteria. In relation to the ideas of Freud, it seems to afford evidence of a negative character; although as will appear, its value in this respect may be unanswerably impugned on account of a failure to push the anametic analysis into infancy.

I. In the first place, the case illustrates the utter unreliability of the stories of relatives as to denial of occasions of suggestion. The mother insisted that prior to his accident, the boy knew nothing of rabies, and that the bite of the dog had caused no emotional perturbation nor apprehension of danger. Whereas Dr. Miller ascertained that in reality the fear of hydrophobia was already present at the time the boy was bitten, as he had already heard his mother and others discussing the danger of being bitten in the dog days, and had been much impressed by the shooting of two dogs that summer. It must be recollected that as a matter of fact there had been much discussion that year in the newspapers in the District of Columbia, about the imminent danger of an epidemic of rabies from stray dogs, and in consequence drastic police regulations had been formulated.

Thus was constituted a common first factor for producing a suggestion-psychosis,* i. e., the antecedent insemination of the ground work of a false belief. It is a significant fact that the first fit was not due to a direct suggestion, but was

*The word psychosis is here used in the physiological sense of a psychological syndrome, and not in the restricted artificial sense in which it is employed by psychiatrists to denote mental alienation, as against the eccentricities which they term neuroses. I use the latter term in the sense of a functional disturbance of lower neurones merely.

precipitated by the painfulness of a correction by his teacher.

II. On the occasion of the dog bite, the groundwork of that belief was built upon by the teasing of his companions; by his mother's anxiety as shown by her consulting books upon hydrophobia, by the fact that there had not occurred that "potent preventative," the killing of the biter; and finally upon the night of the fit, by what was tantamount to an explicit suggestion, i.e., his mother sitting by his bed for fear that something might happen. Afterwards, the induced nature of the psychosis was still further demonstrated, first, by the productibility of fits by the bringing of water; second, by the doctor's diagnosis of hydrophobia; third, by the character of the fits themselves, consisting as they did of crawling on all fours, growling and barking. An interesting sidelight upon the mother's rôle in the psychosis is shown by her arguing from the growth of the boy's hair (whether this was real or not), that he was acquiring an animal-like nature.

III. The further history shows the extreme suggestibility of the patient in the half-yearly periodicity of his attacks (responding to a popular belief), and their occasional arrest by holding him; the suggestion of the Meniére's syndrome by an injudicious doctor; the production of various palsies, in all probability from the mother's suggestions after the reading of the medical books which she consulted daily during the boy's illness (she had even pricked him with a pin to search for anæsthesia). The examination of the saliva by the medical students and the mother's reply to a remark of which the facetiousness reminds one of Bob Sawyer rather than of the medical student of our days, are indications of the surroundings in which the patient's suggestions occurred, and in which suggestibility was too natural to cause astonishment.

It is unfortunate that the data do not permit of an explanation of the strabismus the patient's reports of the opthalmological examination being most unsatisfactory, and Dr. Miller's report not mentioning whether heterophoria was present or not, nor whether the Flees box was used. The visual fields charted shortly after those given in the report showed a pattern considerably different from those

published, and my own observation, when the patient was shown before the Washington Society of Mental and Nervous Disease, made it certain that there was no marked restriction for the field for form as ascertained by the moving finger test. As this examination took place between the two occasions on which the restricted visual fields were plotted, the interpretation of these disparate observations I must leave to clinicians who are conversant with the precautions laid down by Babinski and Chaillous for the investigation of the visual field of hystericals.

IV. For a time the stuperous state of the boy made some of the asylum physicians believe that they had to do with a major psychosis, more especially as his emotional responses appeared to be enfeebled. In reality, however, it was the dominance of the fixed idea which caused the stupor, and the lack of emotional response was due to the centering of the boy's interests upon his illness and their abstraction from the events of ordinary life. So great was the concentration and the unhappiness caused by his state that substitutory mystical ideas were forming, as shown mainly in the boy's dreams. It is hard to say to what degree these were determined secondarily by want of food, sleep, and joy in his life. It is certain that a slight physical dyscrasia existed, as shown by the dermatographia, flushing of the face, fever, foul tongue, and unequal reflexes, though of course the last condition may be normal to this patient. Thus, the trance-like state was not purely psychogenetic. It might be formulated as an onirical delirium colored by a dominant fixed idea acquired by suggestion and accompanied by derivatives of the latter in the nature of defensive conversion phenomena of a consolatory kind. Amnesia by distraction is only to be expected in such conditions.

As time did not permit Dr. Miller either to push farther the analysis of the dreams nor to sound the depth of the amnesia it is profitless to discuss these factors of the case.

V. One fact, however, should not escape notice, and that is the degree in which the symptoms were at least fostered by either the rashness or the lack of precision and the evasiveness of the various physicians into whose hands the boy had fallen. Their unsatisfactory diagnoses, prognoses,

and treatment arose from ignorance of psycho-pathology and sometimes of clinical medicine, an ignorance so crass and so injurious to the patients who fall into their hands that it is high time for the reputation of the profession that it be put an end to.

Cases such as Dr. Miller's are sufficiently clear and simple to be understood even by doctors unaccustomed to psychological thought; but it is only by a tolerably full description that such cases are comprehensible to the uninitiated. Sketches do not suffice to give body to conceptions useful in practice. On the other hand, the prolixity and highly speculative inductions which emanate from researches after the method of Freud are hardly yet suitable except for use save by experts. But I must express my disagreement with those who contend that no one but a psychological expert is capable of comprehending any psychoneurotic disorder.

Dr. Miller's case shows quite clearly that restoration to health quite as effective as that possible by the most rigorous followers of Freud can be secured by means which are hardly more elaborate than those of a sound commonsense. It is true that neither method touches the springs of action, and attempts to re-educate the patient in other matters than the fixed idea at the root of the symptomatic outbreak. Into this deeper therapeusis, however, I do not propose here to enter; nor do I propose in this place to discuss the intimate psychological nature of suggestion;* but accepting the word as representing a definable and analyzable psychological process, I wish to conclude by reaffirming in the light of this case the practical therapeutic utility of the

*See Author, "The Differences Between Suggestion and Persuasion," *Alienist and Neurologist*, 1909.

The views illustrated by this case are fully discussed in author's article in *International Clinics*, autumn, 1908, and in *Boston Med. Jour.*, March 25, 1909, and also in *N. O. Med. Jour.*, and *Montreal Med. Jour.*, May, 1909. See also forthcoming communication to British Medical Association and his article upon Traumatic Neurosis communnicated to Second International Congress upon Industrial Accidents at Rome, May, 1909, published in *Medical Record*, Oct., 1909. See also forthcoming discussion in JOURNAL OF ABNORMAL PSYCHOLOGY upon the mechanism of genesis of Traumatic Neurosis.

formula of Babinski that "a hysterical symptom is one capable of production by suggestion, and susceptible of removal by suggestion-persuasion."

To sum up, the case seems to show first, that the efficient and immediate cause of an undoubted hysteria was a series of suggestions distinctly traceable by judicious anamnesis to recent causes; second, that the effects of these causes were removable by rational persuasion; and thirdly, that it is not reasonable to suppose that if the lyssophobia were a mere epiphenomenon made possible by other submerged complexes, that these latter would have permitted the boy's rapid restoration to apparent psychic health without the least remedying of these; so that there seems no need to invoke in the causation of the symptoms any other psychical traumata, infantile or sexual. To the obvious objection that in such hypothetical traumata might be found the predisposing cause of the lyssophobic attack I can only reply by declaring the onus of proof to lie upon those who advance this view; for the criteria both of psychologic rationality and of therapeusis are not wanting in support of a view of the case in which only the lovers of the recondite for its own sake will confound simplicity with superficiality.

THE OEDIPUS-COMPLEX AS AN EXPLANATION OF HAMLET'S MYSTERY: A STUDY IN MOTIVE. *By Ernest Jones, M.D., of Toronto, Canada. Am. Jour. of Psychology*, January, 1910.

THIS admirable essay well illustrates the value and nature of the contribution with which the methods and doctrines of Sigmund Freud have enriched our analysis of human motives.

For those who have faithfully used these methods and have learned through them to discover and designate and define the origin of traits and tendencies that organize themselves in the minds of men without the aid of conscious purpose and often under the ban of social rules, new insights open into the obscure places of character and conduct. But though these insights in a clearly definable form may be new to science, the very fact that they are true makes it possible for men of genius to divine them and to describe the situations to which they relate in terms that are acceptable to every one.

The power that myths and legends have to engage our interest so strongly even when the events that they describe seem so remote from those of our own lives, lies in the fact that the traits and motives which they imply are our own traits and motives painted in bold outlines. But though we feel these likenesses we shrink from admitting them explicitly, and the reason for this is that there are certain mainsprings of our characters that we are as yet unused to classifying under the categories where they really belong. We are but dimly aware or wholly unaware, as adults, of many of the formative tendencies that marked our infancy and childhood. And yet it is in this remote, period, thrilling with fanciful and often forbidden excitements, joys, and fears, that many strong traits are shaped which silently develop and gain great power over our lives. High up among these influences of early childhood is often a strong, a passionate affection toward one or the other of our parents, our first companions, our first deified models, the first and most natural objects on which our unrestrained and new emotions can readily expend themselves. This early and passionate love may fade later into a wholesome and natural affection or may pass, as an outcome of its very intensity, into an emotion of shrinking and dislike. Then no one remembers that it was ever present in its own form, or that it was accompanied with an intense sense of rivalry or childish hate toward those who seemed to interfere with its development. When it remains, however, and grows stronger instead of being repressed, the time may come when it has to be classified, psychologically, at least as incest, and this danger explains in part its early modification and repression.

Here lies in brief the explanation of the mystery of Hamlet; and let those who incline to regard it as far fetched pause to consider that this legend is only one of a considerable number that are of similar import and to compare with it the other inadequate accounts of Hamlet's character that have been offered hitherto.

It is agreed by some of the most recent critics that the difficulty in the way of Hamlet's consummation of his purpose lay in an internal resistance, not an external obstacle. This explanation indicates as the real nature of this resistance, that, without putting his sentiments into words, he found himself restrained from slaying his uncle because he himself had sipped, emotionally, of the same cup with him; had felt the strain of passion towards his mother, and of rivalry towards her husband — his childish rival. Doubtless, the fact that he was a man refined and educated above his times may have played its part in strengthening the intensity of this inward conflict. But for us as psychopathologists the main fact is probably as here stated.

Dr. Jones's essay develops this proposition at full length and reinforces it with arguments indicating a remarkably thorough study of all aspects of the subject. But it does also more than this. It develops as well the various psychological problems here involved, and thus helps materially towards a better comprehension of the whole trend of these investigations.

J. J. PUTNAM.

REMARKS ON THE PSYCHOLOGY OF OBSESSIONS AND OF MARRIAGE BETWEEN RELATIVES. (BEMERKUNGEN ZUR PSYCHOLOGIE DER ZWANGSVORSTELLUNGEN UND VERWANDTENEHE.) *By Otto Juliusburger. Zentrabl. f. Nervenheilk. u. Psychiatr. Jahrg.* xxxii. N^r. 298, S. 830.

THIS article contains some valuable thoughts, particularly on the subject of obsessions, developed in the light of the following interesting case. Juliusburger had previously described the case in 1901, when the patient was principally suffering from attacks of intense depression and a number of obsessions. He had the idea that he had committed some fault in his work for which he would be prosecuted or dismissed; this so distressed him that he had to give up his work. He could not tolerate the presence of his family, and especially the glances of his two children, in which he read unspoken reproaches. In the presence of a certain lady he became sexually excited, and after leaving her conceived the idea that on

shaking hands with her he might have conveyed to her some semen which might reach her uterus and bring about impregnation. For many months he suffered severely from the dread and self-reproach that accompanied this idea, and later occasions of meeting the lady were followed by an acute revival of the symptoms. Other more transitory obsessions need not here be related. He was several times under treatment, but obtained only temporary relief.

Very similar symptoms were present eight years later, and in addition the patient had developed an unreasonable jealousy about his wife. It is evident in such a case that to explain the symptoms by the use of such terms as "psychopathic constitution" explains nothing, and that in a psychological analysis of the origin of them lies the only hope of clarification. The author shows in detail that all the apparently absurd and disconnected symptoms arose from a common basis, and that their bizarreness and incongruity were the results of distortion of groups of ideas in themselves perfectly logical.

The lady in question, to whom the patient's obsessions first referred, was his brother's widow. He fell passionately in love with her, and remained so; she responded, and intimate relations developed between the two. On account of the difference in their ages she refused to marry him, and he thereupon became engaged to her daughter, i.e., his own niece, who closely resembled her mother in both appearance and temperament. The sister-in-law first objected to the marriage, which would make her her lover's mother-in-law, but finally consented; even during the engagement the guilty couple maintained their previous relations. The marriage meant to the patient that he would remain in close connection with his former mistress, and also offered to him an adequate substitute for her in the form of her daughter, his wife. It proved, however, to be only an imperfect success in this respect, and his attachment to his sister-in-law continued, now provoking a deep mental conflict. Remorse, shame, dread raged in his heart, and could be only partially suppressed.

We now see that in the light of this knowledge the symptoms began to show more meaning. The patient's dread that he might impregnate the lady was a fully justified one, for it was well in the bounds of possibility, though the actual *modus operandi* he feared, which was a distortion of the real cause of danger, sounded absurd. His resentment of and ill-temper towards his wife sprang from a buried dissatisfaction with his marriage; it is noteworthy that during the

obsessional accesses he over-compensated this dissatisfaction by being unusually kind and tender to her. The sight of his children was further a standing reproach to him, which he could not endure. His secret desire to be disloyal to his wife, and to renew the old relations with her mother, expressed itself, among other ways, by his jealousy of her. "Shared pain is half pain — shared guilt is half guilt." The patient unconsciously projected on to his wife his own thoughts, and ascribed to her his own guilty wishes; this is the commonest mechanism of unreasonable jealousy.

The author then expounds, along the lines laid down by Wernicke, Abraham, Gross, and especially by Freud, a number of theoretic aspects of psychical dissociation, transposition of psychical energy, etc., together with a differential analysis of fixed ideas (*Uberwertigen Ideen*), obsessions, and autochthonous ideas. These three processes represent different grades of disaggregation, of separation between the intellectual and affective components of a complex (intra-psychical ataxy of Stransky, Disthymia of Juliusburger). The article deserves careful reading in the original.

ERNEST JONES

CONTRIBUTION TO THE PSYCHOPATHOLOGY OF HYSTERICAL TWILIGHT STATES AND AUTOMATISMS. (BEITRAG ZUR PSYCHOPATHOLOGIE DER HYSTERISCHEN DÄMMERZUSTÄNDE UND AUTOMATISMEN.) *By B. Schwarzwald.* Journal of Psychol. u. Neur. Dez., 1909. Bd. xv. Heft 3. S. 89.

SCHWARZWALD here reports an interesting case from the Lausanne psychiatric clinic. He begins with the remark that "the Freudian theory of the neuroses have made possible for us a deep insight into the genesis of the psycho-neuroses, and so given the key to the interpretation of numerous, hitherto inexplicable symptoms," and adds that the mechanism of hysterical twilight states and automatisms is a question that has perhaps been least considered in the light of this theory.

The patient was a man of the peasant class, aged thirty-six, who came under medico legal observation as a result of his setting fire to his own house. For some little time before this he had been under treatment for various nervous symptoms, such as apparently causeless attacks of excitement, refusal to take food unless his wife first tasted it, absent-mindedness, aggressive actions towards his wife (attempting to throttle her), and occasional attacks of general

stiffness followed by sudden outbursts of sweating and diarrhoea. The arson was carried out in an obviously automatic state, at the time everything "seemed black," and as soon as he had done it he threw himself on the bed and lost consciousness. There was no subsequent amnesia, but he could give no explanation for his deed.

Schwarzwald discusses the reason that led him to make the diagnosis of hysteria, and then gives a short account of some analytic observations, mostly made when the patient was in a state of hypnosis. The patient had at the age of twenty-eight married a widow ten years older than himself; the house, furniture, etc., belonged to her. As the years went by little misunderstandings arose between the couple, gradually getting worse, and she kept throwing up at him the fact that she was the mistress and owner of the house; when she died her possessions would return to her family and he would have to go back to farm work. At first the patient denied any idea of jealousy on either side, but gradually the story came out that the wife had made warm friends of two girls, had repeatedly invited them to the house, and had lately got so jealous about her husband that she had ordered him abruptly to break off relations with them, a proceeding that made him very foolish and contemptible in their eyes. He had then got suspicious of his wife's friendship to another man, one of his school friends, and had half thought that she might have thrown the girls in his way so as to provoke a cause for divorce, and so join the other man. His protestations of the innocence of his relations with the girls gradually weakened, and he ultimately admitted that various intimacies had passed between him and the younger of these (Aline). He had fought hard, and on the whole successfully against the temptation, had suffered very greatly from remorse at having even thought of disloyalty to his wife, and had gradually repressed the sexual cravings. At this time various symptoms had broken out, evidently an anxiety neurosis, the result of a divorce between physical excitation and psychical repression.

Ideas of jealousy about his wife and of being poisoned by her unconsciously developed, being, as the author well explains, the result of projection of the patient's own thoughts and wishes on to another person (his wife). The attacks, first on his wife's person, and then on her possessions, were produced by irruptions from his own repressed and unconscious wishes. An interesting side-point was that the patient himself attributed his illness to having got violently excited over a scene in which he refused to support a given election candidate. The reason for his refusal he could not give, but in hypnosis it was found to be the fact that the candidate in question had betrayed his wife, and so was unworthy of support for a public

office. This well shows that a statement made by a patient, e.g., as to the cause of his illness, may not be so accidental and foolish as it appears on the surface, though the true significance of it may be quite unknown to him, being repressed into the unconscious.

A few days before the arson the patient had dreamt the following dream, which he related to his wife: " Seven children left home after the death of their parents. The six eldest decided to get rid of the youngest, Wilhelm, and, after making a fire, left him in the night. He found his way to a house where he was hospitably received. On his way he heard a noise in the bushes, and, fearing a wild beast, threw himself in terror to the ground, face downward. It was only his favourite dog, whom the others had locked up at home, and who came and licked his hands. After some years the brothers returned poor, and were magnanimously forgiven by the youngest."

The dream is an evident parody on the well-known fairy tale, " Le Petit Poucet," with the following three differences. In this the parents are not dead, and it is they who on account of hunger leave the children in the forest. The relations between the children are amiable, and it is the youngest who saves the others. Wilhelm is the name not of the youngest child, but of the father. The patient had suffered much as a child from witnessing domestic scenes about the question of money circumstances, and had consoled himself with day dreams in which he played the part of Le Petit Poucet in earning wealth and saving his family. He read the tale later, at the age of sixteen, but it awoke such painful memories that he was very distressed and gave away the book.

Analysis of the dream brought out the following. The young boy Wilhelm bore the features of his wife's niece, Benjamine, who closely resembled his wife. The six brothers each bore one of his own features, one his eyes, another his nose, and so on: they were a " decomposed " portrait of himself, as so often occurs in dreams and in mythology. (See *American Journal of Psychology*, 1910, p. 105.) The wish of the dream was that the patient (the six brothers) could leave his wife (Wilhelm–Benjamine), seek happiness for some years in the world (with Aline), later return to where she had been hospitably cared for, and be forgiven by her. The dog stood for his faithful school friend, who only licked Wilhelm (his wife), as she lay face downward (in an asexual position), and did not attack her. In compensation for identifying his wife with a much younger person (Benjamine and Wilhelm) the youngest brother was given the name that in the original tale belongs to the father.

Scharzwald discusses the significance of the fire episode in the dream, and believes it was a prophecy of the later incendiarism in the

sense that, as Freud has pointed out, dream wishes are sometimes realized in later deeds. The dream and the rest of the case are here greatly abbreviated; the article is well worth reading in the original. ERNEST JONES.

A STUDY OF GALVANOMETRIC DEFLECTIONS DUE TO PSYCHO-PHYSIOLOGICAL PROCESSES. *By Boris Sidis, Ph. D., M.D., and H. T. Kalmus, Ph. D.*, Psych. Rev., November, 1908, December, 1909.

IN our study of galvanometric deflections due to psycho-physiological processes we used the following arrangements: In a series with a battery we put a sensitive galvanometer and two electrodes across which the subject placed himself, thus closing the circuit. The battery was a single cell, giving a constant electromotive force of about one volt. The galvanometer was of the suspended coil, D'Arsonval type. The deflections were read hy means of a beam of light deflected from a mirror to a telescope with a scale. A deflection of one centimeter on the scale corresponded to less than 10^{-9} amperes, through the instrument. When the sensitiveness was too great for our experiments a resistance was shunted around the galvanometer. The electrodes were glass vessels of about four liters capacity, nearly filled with a strong electolyte, such as a concentrated solution of NaCl. Into these vessels copper electrodes of about five hundred centimeters area were placed. The circuit was completed by placing the hands, feet, etc., one into each electrode solution.

The possible sources of error at this point are twofold: (1) Due to the variation of the liquid level at the wrist, and (2) due to movements of the hand as a whole. To overcome these difficulties the following device was used: The wrist was covered with shellac for a length of several inches, so that the free liquid surface of the electrode was always in contact with shellac. The shellac was covered by a layer of paraffin. The hand was put in splints in such a manner that only a small fraction of the skin was covered and no appreciable muscular contraction of the phalanges could take place. If now a stimulus was given, a stimulus that aroused an emotion, a marked galvanometric deflection was observed.

As the result of a large series of experiments performed on more than half a dozen subjects we arrived at the conclusion that *pure, ideational processes, such as thinking, calculation, solving problems,*

representing pleasant or painful experiences have no effect, while sudden violent emotions and intense sensory stimulations of a painful and disagreeable character, such as burns, pricks, electric shocks, and fetid smells are followed by marked galvanometric deflections.

We find in our experiments that muscular activity of those parts of the body actually forming the circuit bring about galvanometric deflections, while activity of the more remote parts of the body are ineffective.

The absolute magnitude of the deflection varies according to the varying condition of the experiment. Different experiments performed with different concentration of electrode-solutions gave different deflections, in fact, the direction and magnitude were varied at will in this way. Also substituting lead electrodes for copper electrodes changed the deflections largely. *Different parts of the skin gave different original deflections.* However, superimposed upon this original steady deflection is a deflection due to various given stimulations, and to the induction of psychophysiological processes of an affective and emotional character.

The shellac and paraffin with which we covered the subject's wrists, as well as the splints put on the hands and forearms, made the skin area washed by the liquid electrodes constant. The galvanometric deflections observed under conditions of stimulation could not therefore be referred to variations in skin contact. If resistance be the factor, then the observed galvanometric deflections may be either due to changes of resistance of the constant area of the skin, or of the body through which the current passes. Skin resistance was eliminated by the following procedure: Hypodermic electrodes were inserted well under the skin until blood flowed. After a few minutes the deflection with the needle electrodes did not differ from those without the needle electrodes. This clearly eliminates the factor of skin resistance.

That the skin has nothing to do with the phenomena under investigation can be proved by the following procedure: The skin was covered with shellac and paraffin, leaving only the finger nails exposed. Under such conditions definite galvanometric deflections were obtained, deflections induced by emotional states and physiological activities.

Having excluded skin effects in general and skin resistance in particular, we may consider next the resistance of the body as a possible factor of the so-called galvanic phenomenon. Since electrical

resistance of a body depends on temperature and concentration of body fluids, we have to consider the two factors. Now electrolytes have a positive temperature-coefficient of about two per cent per degree. Our experiments with hot and cold applications gave but slight variations insufficient to account for the galvanometric deflections observed under the influence of emotional states. The variations due to raising the temperature did not differ from those due to lowering the temperature. Furthermore, after a minute or two of continuous cooling or heating of the arms the galvanometric reading was the same as that before the temperature-change. The cold and hot application act, therefore, as do other sensory stimulations. The temperature factor cannot be a cause of the galvanic phenomenon.

That changes in the concentration of the body fluids or changes of circulation have no effect can be proven by the following simple procedure: The circulation was effectually cut off by Esmarch bandages. The pulse was gone and the hand assumed a cadaverous hue, still the same galvanometric deflections were easily obtained under the same psychophysiological conditions.

Our experiments go to prove that the causation of the galvanic phenomenon cannot be referred to skin resistance, nor can it be referred to variations of temperature, nor to circulatory changes with possible changes in the concentration of the body fluids. *Since as we have pointed out the electrical resistance of a given body depends on two factors — temperature and concentration — the elimination of both factors excludes body resistance as the cause of galvanic phenomenon. Resistance being excluded the galvanometric deflections can only be due to variations in the electromotive forces of the body.*

The heart beat should be taken into consideration as one of the possible causes of galvanometric deflections, due to psycho-physiological processes. Experimenting with the capillary electrometer, Waller came to the conclusion that "a marked electrical variation is manifested at each pulsation of the heart." We repeated Waller's experiments, but we could not confirm his results with our galvanometer. We found, however, that a reversal of the position of the hands — putting the right in place of the left hand — made a difference in the magnitude of the deflection and occasionally in its direction. We find here an additional proof that we deal in the galvanic phenomenon, not with variations of resistance, but with electromotive forces. Our experiments prove that a stimulus causes a deflection superimposed upon the original deflection which is not always in

the same direction. *The superimposed deflections, due to stimulations, change in direction with the reversal of the hands. We deal, therefore, here with a factor that has direction. Since the factor of resistance has no direction and the only factor that has direction is electromotive force, we come to the conclusion that the galvanic phenomenon is not of the nature of a resistance, but is essentially of the nature of an electromotive force. Our experiments thus clearly show that active physiological processes, sensory, and emotional processes, with the exception of purely ideational ones, initiated in a living organism, bring about electromotive forces with consequent galvanometric deflections.*

AUTHOR'S ABSTRACT.

EXPERIMENTAL STUDIES IN THE INNERVATION OF THE SKIN* *Journal of Physiology.* Vol. 38; Nos. 2 and 3. 1909. Wilfred Trotter and H. Morriston Davies.

THIS paper is divided into four parts.

PART I. *Methods of experimentation.*— (Material and technique of observation.) It was obvious that in undertaking investigations based on the experimental division of sensory nerves in the human subject much of the earlier part of the time and material would have to be devoted to the discovery and selection of suitable methods and also to the training of the observer in the recognition and interpretation of sensations, many of which would be new to him. It was recognised further that with the experience gained much of the earlier work would have to be revised, and that no conclusions could be based on the results yielded by the division of a single nerve. It was felt that the great disadvantage of Head's work lay in the fact that the observations were made on only one nerve area and in only one subject, and that regeneration must have begun before all the desired work could be accomplished on the uninnervated skin. Moreover, it was quite impossible to be sure what the earliest phenomena of this change would be, and it was felt that they might easily pass unobserved if the research were limited to the division of a single nerve.

For these reasons the authors divided a series of nerves in each other so that each observer should have the advantage of experiencing the difficulties that the subject in such an experiment has to contend with, and should have the experience with more than one nerve.

EDITOR'S NOTE.— As no full account of this important work has appeared in the American literature, we have asked the authors, who kindly acceded to our request, to furnish a personal abstract of it.

The following nerves were divided: The internal saphenous; the great auricular; three branches of the internal cutaneous of the forearm; a branch of the middle cutaneous of the thigh in one subject, and the similar branch in the thigh of the other subject. The exact position of the nerve was ascertained beforehand by the application of a faradic current through a finely pointed electrode, which when placed exactly over the nerve produced a characteristic fluttering sensation in the periphery of the area of distribution of that nerve. About a quarter of an inch of the nerve was resected in each case and the ends sutured together. Eucaine and adrenalin were used to anæsthetise the parts.

One of the great difficulties in testing the sensibility of an area is that the subject has to deal with the recognition of forms of stimuli to which he is unaccustomed, so that as might be supposed even the delicate hair æsthesiometer of von Frey is incapable of revealing the finest shades of sensibility. The authors, however, found that by the use of "stroking touches," *applied by either the experimenter, or the subject himself, and utilising for comparison the sensations similarly obtained from obviously normal skin an area, the sensibility of which was obviously affected, and the size of which was considerably greater than that obtained by any other method, could be outlined.

Sensibility to touch was tested by three methods. Qualitatively by the "stroking touch,"* and quantitatively by cotton wool or the camel's hair brush — minimal pressure methods; and by von Frey's æsthesiometer, graduated pressure method.

For the determination of sensibility to pain an algometer was devised in which the strength of the stimulus could be regulated by the resistance to bending of a von Frey hair.

Solid copper cylinders terminating in a short process one millimeter in diameter were used for investigating change in thermo-sensibility. While with experience it was found to be quite easy to distinguish cold from cool, hot from warm, and cool from "indifference," it was quite impossible to recognise constantly between warm and "indifference"; further sensations introspectively indistinguishable from true warmth were frequently experienced by the subject when spots far within the true thermo-anæsthesia line were being tested; so that the outer limit of a thermo-anæsthetic zone could be ascertained only by testing it with cold. Discrimination tests were found to be of little use except in distinguishing between true and "hallucinatory" warmth, and as an aid in determining thermo-anæsthesia.

*An account of this method was published in the Review of Neurology and Psychiatry, 1908.

PART 2. *Results of Nerve Section.*— Subdivided into sensory and motor. If the part be examined by the stroking touch method after division of a nerve an area of considerable numbness can be outlined which corresponds very closely with the camel's hair outline. This is surrounded by a larger marginal zone, and touches on this give rise to abnormal tactile sensations having the characters of undue smoothness or sharpness and absence of any tickle.

Now all sensations are distributed in small spots, and those of touch are intimately connected with the hair follicles. The most satisfactory method of quantitatively examining the area is by von Frey's æsthesiometer. It is then found that in the outer part of the marginal zone no change is discoverable — area of minimal hypoæsthesia; in the centre again no sensation of touch can be elicited — area of maximal hypoæsthesia, but concentrated about the outline of camel's hair anæsthesia is the transitional area in which, when travelling towards the centre, rapidly increasing strengths of von Frey hairs are needed to elicit the sensation touch.

Touch can be distinguished from pressure in that the sensation touch consists of a light superficial pat whether it needs a hair of strength seventy milligrams or three thousand milligrams to produce it; it occurs only at the moments of making or breaking the contact, is momentary and elusive, and follows close on the stimulus.

With temperature and pain the resulting loses were much the same in character and area, i.e., a central anæsthesia separated from the normal b a hypoæsthesia.

One very interesting phenomenon was noticed. On about the tenth to twelfth day, after section hyperalgesia appeared in the upper parts of the anæsthetic areas, and lasted for some three to four weeks. This hyperalgesia was specially marked in the region of the larger veins and was elicited more readily by a very light touch, heavy pressure producing no pain whatever. The authors suggest that this is due to a phlebitis set up by the products of nerve degeneration.

Weber's test. No specific loss of the capacity to discriminate two points was found; that is to say that whenever the compass could be felt some power of appreciating the distinctness of the two contacts remained.

A central area of paralysis surrounded by a zone of paresis was seen also in connection with the vaso-motor, pilo-motor, and sudo-motor phenomena. Whilst the pilo-motor and sudo-motor recovered approximately in conjunction with the sensory functions, the vaso-motor change had disappeared in three weeks. The pilo-motor reaction was, however, never lost for local stimulation or the injection of adrenalin.

PART 3. *Phenomena of recovery.*— Recovery begins some ten to fourteen weeks after section and reunion, at the proximal end of the area, and extends along the line of the nerve, in the form of a wedge, to the periphery. The first indication of the return of sensibility is the appearance of *peripheral reference.* If at this stage the proximal part of the anæsthesia is touched a clear trickling sensation will be experienced at the periphery. As recovery proceeds it will be found that touch sensations are felt at the spot stimulated, at the periphery or in both localities. Peripheral reference is obtained also with cold and pain. The point of reference is at that extreme part of the area where the fluttering sensation was felt when the undivided nerve was electrically stimulated. The spot can be accurately named, but on attempting to indicate it with the finger the localisation seems to vanish. Further repetition of the stimulus produces a desire to rub, not the part stimulated but the spot to which the stimulus is referred.

Both the local and peripheral sensation of cold in a regenerating area are of great intensity, amounting, when a large area is stimulated, to pain, even with a temperature as high as twenty degrees C. The local and referred sensations of pain are also intense, peculiarly unpleasant, and produce an intense desire to rub the part where the sensation is felt. The referred sensations of cold and pain are both abnormally persistent.

During the later stages of regeneration proximal reference obtains; whilst in the great auricular area a condition which could be called diametric reference was present.

Heat itself is never referred as heat, only as pain and the reappearance of the sensation hot is much later than of the other three.

Regeneration of touch is also quantitively progressive.

PART 4. *General Considerations.*

(*a*) *The relation of the work of the authors with that of Head.** There is considerable resemblance between the observations on the results of nerve sections made by the authors and those of Head; but the authors failed to find corroborative evidence for the hypothesis of Head that the skin is supplied by two systems of

*This criticism deals only with the first two papers written by Head. a. Head, Henry, in conjunction with Rivers, W. H. R. and Sherren, J. Brain 28. 1905. b. Head, H. and Sherren, J. Brain 28. 1905.

The article on "A Human Experiment in Nerve Division," by W. H. R. Rivers and Henry Head was published in December, 1908, in Brain, while the author's paper was in the press. In this last article of Head's there are considerable differences in the presentation of the hypothesis of the epicritic and protopathic system of fibres.

nerve fibres (protopathic and epicritic). According to this hypothesis there is between the central zone of analgesia (the zone of total anæsthesia), and the outer border of cotton wool anæsthesia an intermediate area over which there is a perception of a pain of a peculiar unpleasantness and of thermal stimuli of extreme degrees. Now while the cotton wool or camel's hair outline of anæsthesia does denote a very fairly abrupt increase in the intensity of the hypoæsthesia, yet when it is realised that touch is a specific sensation and can be accurately distinguished from pressure, graduated stimuli with von Frey hairs can be substituted for the minimal pressure methods (cotton wool, etc.), and it is then revealed that the true anæsthetic boundary corresponds extremely closely to that of analgesia. In a similar way a graduated improvement in the sensibility to touch will be found when traveling outwards from the outline of camel's hair anæsthesia. That is to say, there is no true intermediate area sensitive to pain and not to touch.

Of sensibility to temperature Head says that the intermediate zone is sensitive to extremes of temperature. With this the authors agree unless it be meant that the sensibility to these is of normal acuteness. In the intermediate zone there is, outside the area of thermal anæsthesia, an area of thermal hypoæsthesia in which the extreme degrees of temperature are recognised not as hot and cold, but as warm and cool. Now if an area has its sensibility to temperature sensations reduced in this way there must be a corresponding increase in the range through which temperatures are felt as indifferent (normal skin temperatures just above or below the temperature of the skin are felt as indifferent); this is shown schematically in the subjoined table and illustrates the condition of thermal sensibility in the intermediate area.

Series of sensations obtainable from normal skin		Series of sensations obtainable from hypoæsthetic skin		Approximate thermometric relations	
Position in series	*Sensation*	*Sensation*	*Position in series*		
Supermaximal	Pain	Pain	Supermaximal	140°F.	60°C.
Maximal	Hot	Warm	Maximal	120°F.	50°C.
	Warm	Indif. warm	Minimal	100°F.	38°C.
Minimal	Indif. warm	Indifferent	Intermediate anæsthesia	95°F.	35°C.
Intermediate anæsthesia	Indifferent	Indifferent	" "	90°F.	32°C.
" "	Indifferent	Indifferent	" "	85°F.	30°C.
Minimal	Indiff' cool	Indifferent	" "	80°F.	27°C.
	Cool	Indif. cool	Minimal	70°F.	21°C.
Maximal	Cold	Cool	Maximal	60°F.	15°C.

It is in connection with sensibility to pain, however, that the author's observations and those of Head are most at variance. According to the latter hyperalgesia is present in the intermediate zone from directly after nerve section, and when regeneration occurs this hyperalgesia extends throughout the formerly analgesic zone. The author's, on the other hand, found that after the pain associated with the operation had passed away there was no hyperalgesia till the tenth or twelfth day, that then patches of hyperalgesia occurred along the nerve trunks *in the upper part of the central and otherwise analgesic and anæsthetic area*, that this gradually subsided during the next four to six weeks, and that from that time until the commencement of regeneration there was *no hyperalgesia anywhere in the area of distribution of the divided nerve*. With, however, the onset of regeneration sensibility to pain returned gradually throughout the area and the pain was during this time, and until the completion of recovery, of a peculiarly unpleasant character and associated with the reference phenomenon. Further, the return of sensibility to pain occurred *pari passu with the return of sensibility to cold and to touch*, in a hypoæsthetic form, of course. That is to say, as regards the sensibility to pain and touch there was no evidence of a regeneration first of a system of " protopathic " fibres and later when that was complete of a system of " epicritic " fibres. Further, in conjunction with the return of power to appreciate touch there was power of discrimination of two points. With Head the power of discriminating the two points of a compass was the last to return.

According to Head's hypothesis dissociation of sensation, when present, should take one of two forms. Either the loss of those sensations subserved by the epicritic fibres (light touch, intermediate temperatures, etc.), or of those subserved by the protopathic fibres (pain and extremes of temperature). Now after division of two branches of the internal cutaneous of the forearm the authors found there were three islets of skin the sensibility to touch of which was of almost normal intensity; they were, however, completely insensible to both the extremes and means of temperature and to pain.

(*b.*) *On the peripheral mechanisms of sensation.*— This section deals with certain hypotheses tentatively put forward by the authors. Any attempt at abbreviation would render them dogmatic.

(*c.*) *On the constitution and distribution of the cutaneous nerves.* — Each cutaneous nerve divided contained fibres connected with seven different functions, four being concerned with afferent impulses — touch, cold, heat, pain, and three with efferent impulses — vaso-motor, sudo-motor, pilo-motor. Of six of these it was made out definitely that there was a central area of complete loss surrounded by a

zone of incomplete loss. The vaso-motor changes although apparently of the same nature were too transient and too difficult to be observed with certainty to be included categorically. The objective evidence of the central complete and surrounding partial loss of pilo-motor and sudo-motor functions confirms in a most striking manner the view, which of necessity has to a great extent to be based on subjective evidence, that the other functions are similarly distributed.

By quantitative methods, passing outwards from the center of an anæsthetic zone where the sensation of touch cannot be appreciated, there is a gradual increase in the sensibility of the part to this form of stimulation, until the threshold of the sensibility to touch is the same as that of normal skin, but outside this again there is a further zone where quantitative changes are definitely present. The existence of this graduated hypoæsthesia indicates overlapping of nerve distribution.

(*d.*) *On the sensory peculiarities of recovering areas.*— In this section certain hypotheses are discussed relative to the intensity of regenerating cold; the apparent delay in the regeneration of sensibility to heat, and the phenomenon of peripheral reference.

AUTHOR'S ABSTRACT

PSYCHO-NEUROTIC SEQUELAE IN THE SURVIVORS OF THE COURRIERES CATASTROPHE (UBER PSYCHO-NEUROPATHISCHE FOLGE ZUSTANDE BEI DEN UBERCEBENDEN DER KATASTROPHE VON COURRIERES AM 10, Marz, 1906.) *Stierlin. Monatsschr. f. Psychiatr. u. Neur.* Bd. xxv, Ergänzungsheft, S. 185.

FOLLOWING on the numerous articles in the Italian journals on the psychical sequelae of the Messina earthquake comes this study of extraordinary interest by Stierlin. It is a contribution of capital importance to the question of the relation of trauma to the psychoneuroses. In an article one hundred and thirty-eight pages long the author carefully describes twenty-one cases that were observed from the day of their rescue for a period of two and a half years. In formulating his conclusions he is aided by having made on the spot similar studies immediately after the catastrophies of Messina and Valparaiso, and he relates in addition his experiences of these. The psychical trauma, after the Courrières catastrophe, was complicated by the presence of physical factors, such as coal gas poisoning, starvation, etc. In fact, one of the most valuable parts of the article is an excellent description of the carbon monoxide psychosis. It is

impossible here to resume such a mass of original observations, and most of the conclusions are mingled in such a detailed way with the case descriptions as to make it difficult to extract them. The article should certainly be read in the original by all those interested in the subject. Of the twenty-one cases only three showed signs of hysteria, the two signs being reduction of the visual field and an increased pulse rate. After Messina the most striking and uniformly made observation was the remarkable rarity of hysteria. Bianchi, the well-known psychiatrist, saw not a single case among the five hundred patients under his care. Stierlin saw two cases, both in old hysterics. The next most remarkable fact was the rarity of depression and of psychical symptoms in general amongst most of the Messina survivors; resignation was the characteristic feature present. Exceptional was the occurrence of a group of symptoms (expectation anxiety, palpitation, insomnia, etc.), which Stierlin correctly places under Freud's Angst-neurosis. He concludes by quoting with approval Babinski's statement that " l'émotion, même la plus vive, ne crée pas l'hystérie."

ERNEST JONES

PSYCHO-ANALYSIS IN A CASE OF MELANCHOLIC DEPRESSION. (PSYCHANALYSE BEI EINER MELANCHOLISCHEN DEPRESSION). *By A. Maeder. Zentralbl. f. Nervenheilk. u. Psychiatr. Jahrg.* xxxiii. Nr. 302, *S.* 50.

THIS is an interesting, though brief, psycho-analysis of a case of manic-depressive insanity, the second one in this malady to be published.* The patient, a farmer, aged forty-two, came to the polyclinic with the following complaints: For about a year he had been very depressed, he complained the whole day about his loss of strength and energy, his whole body felt limp, he could no longer carry on his business or care for his children, and he feared that he was becoming insane. His appetite was capricious, his sleep broken. He had recently sold his farm, but shortly afterwards bought it back at a slight loss ($160). He continually worried over this loss, although he knew it was quite negligeable in comparison with his means, and thought that the neighbours despised him for having made

*See " Psycho-analytic Notes on a Case of Hypomania." *Amer. Jour. of Insanity.* October, 1909.

such a fool of himself. During the relation of this the whole bearing and appearance of the patient clearly expressed his mental depression, as did the frequent sighs he uttered. He said that he was quite happy and contented in his married life, and was quite unable to give any cause for his condition.

Association tests revealed mainly three groups of "complexes." The first two related to his present anxiety about his health and to the money affair, about both of which he had previously spoken. The first one he had not only concealed, but had misled the physician about; it was to be expected, therefore, that this complex had a greater pathogenic significance than the others. It referred to his wife, and was brought out by the test words, "finger-ring," "cook," and "stupid." Investigation of this disclosed the fact that he was very discontented with his wife, on account of her stupidity, lack of interest in sexual matters, want of energy and initiative, etc. For a number of years conjugal relations between them had ceased, on account of his increasing impotence, a matter that lay at the centre of his want of confidence in himself, depression, and other symptoms.

The anamnesis showed the following points: Both the patient's parents had been stern, sharp, and energetic. His eldest brother had been very tyrannical in his treatment of him, had discouraged him at school by exposing him to the mockery of the other boys, and so on. The patient had always been of an evidently feminine temperament, had often been told it was a pity he had not been born a woman, and had always enjoyed the company of men much more than that of women. He had married more from obedience to custom than from any other motive, and lived in his father-in-law's house during his married life. The father-in-law, who was of a tyrannical disposition, was admitted to an asylum for senile dementia in the end of 1900, an event directly related to the outbreak of the patient's malady, and to his fear of becoming insane (identification). The patient's dreams were either directly homosexual, or were clothed in a symbolism of the kind characteristic of women.

During the analysis, which lasted only a few days, the patient's condition strikingly changed for the better, and has remained excellent ever since (six months). It was explained to him that his judgment of his wife had been unfairly harsh, and largely determined by his own temperamental peculiarities. He was advised to expand his interests by seeking the company of congenial friends (sublimation), and was discharged after a stay of three weeks.

ERNEST JONES

HERZ'S PHRENOCARDIA (IST DIE HERZSCHE PHRENOKARDIE EINE WOHL ABGEGRENZTE BESONDERE FORM DER HERTZNEUROSEN?). *Erb. xxxiv Wanderversammlbung der südwestdeutschen Neurologen und rrenarzte. Monatsschr. f. Psychiatr. u. Neur. Aug.*, 1909. *Bd. XXVI. S.* 170.

In a brochure recently published (Die sexuelle psychogene Herzneurose Phrenokardie, 1909) Herz described a condition which he would mark off from the other cardiac neuroses. It is characterized by three main symptoms, and other less essential ones; those are: a muscle pain situate to the left of the cardiac apex, and evidently induced by movements of the diaphragm, inhibition of respiration, especially of expiration, with the frequent occurrence of deep sighing inspirations, and thirdly subjective palpitation. Herz sees as the cause of the malady psychogenetic disturbances of the sexual impulse. As Dr. A. A. Brill pointed out in giving a review of the book (JOURNAL OF ABNORMAL PSYCHOLOGY, Oct.-Nov., 1909, p. 284), the syndrome is merely a well-recognised form of the anxiety neurosis, described by Freud fifteen years ago.

In the present paper Erb discusses both the clinical and pathological features of the malady. He agrees with Herz that the condition is really one to be met with in a pure form, though it is often combined with other nervous manifestations; further, that the physical state of the heart is throughout normal. He has observed twenty-five cases (nineteen in women, six in men). The question of the sexual ætiology could be investigated in only sixteen of them. Of these sixteen such an ætiology could be demonstrated in ten cases, and there were indications of it in the other six. It need hardly be said that Erb is in no sense influenced by Freud's views, to which indeed he is antipathetic. He is in general an opponent of all who attach importance to disturbances of the sexual impulse as a factor in the causation of neuroses (his strong views as to the harmlessness of sexual abstinence, for instance, are well known), and is very disinclined to investigate such questions if they can possibly be avoided. The facts mentioned above, which were so evident that even Erb could not overlook them, are all the more significant.

ERNEST JONES

DREAMLIKE AND RELATED STATES. ("ÜBER TRAUMARTIGE UND VERWANDETE ZUSTÄNDE.") *By Dr. L. Löwenfeld, Zentralblatt für Nervenheilkunde und Psychiatric.* NO. 291 AND 292.

In the above papers Dr. Löwenfeld reports and analyzes a series of twelve cases characterized by states of altered perception

of the external world. The patients report that at times, for periods lasting from a few minutes to a day or longer, there is a strangeness in their perception of their environments, in some instances including the patients' own personality; familiar objects look strange and unfamiliar, or they look changed and bizarre; in some cases the whole environment gives the impression of unreality, of a vision, and the patient feels as if he were only half awake, as if in a dream, in a hypnotic or somnambulistic state, as if his personality is altered, and as if his actions were not those of a conscious personality, but of an automaton. During these periods, however, the patients react to their environment in a normal way and show nothing unusual; they are conscious that they are in an abnormal condition, and they retain a clear memory of what transpires during these states. These last characteristics serve to differentiate these states from the twilight states of hysteria and epilepsy.

An anology to these states, which are not rare, and which occur in various forms of neuroses and psychoses, is to be found in normal life. To an individual whose attention is absorbed by mental states which have a high emotional tone, the external world and events do not present themselves with that digree of intensity and clearness which they usually have. Inadequate attention to the external world diminishes the consciousness of its reality. The mental disturbances bringing about the states in question therefore lie, to use Wundt's terminology in the processes of apperception and in the sense of activity (Höffding) which accompanies all such processes. When the disturbance is in relation to perception then external objects no longer give the impression of their reality. On the other hand, if this sense of activity is inhibited in relation to ideational or volitional processes we have the feeling of the unreality of the self.

An analysis of the cases shows that the disturbances may be of two kinds; objects may appear unfamiliar or they may appear changed and bizarre, the form of the disturbance is determined by the factors which make up the sense of familiarity. These factors are: 1. Clearness of perception. 2. Reproduction of perceptions. If we have a disturbance in the clearness of perception and the power of reproduction is intact, then the patient experiences the incongruity between the objects as he perceives them, and the memory images, and consequently the objects look to him altered and bizarre. If, on the other hand, objects are perceived clearly, and the disturbance

lies in the reproductive process, then the objects will look new and unfamiliar.

An examination of the cases presented shows that in the majority of them these dream-like states were associated with fear states. It needs no discussion to show that fear can have a disturbing influence on the apperceptive activity, and unquestionably plays an important role in the etiology of these abnormal mental states.

Subconscious emotional complexes may likewise, as Jung has pointed out, produce similar mental disturbances. One case reported by the author is unusual, as the subject was perfectly well in every way except that occasionally, under certain conditions, her environment would look displaced as if it were pushed away, the streets would at times look to her as if they had changed in direction. There were no associated fear states, obsessions, or any other mental disturbances. The author considers the probability that in this case there was some subconscious complex which under certain condition had a disturbing influence on the apperceptive processes.

H. LINENTHAL

REVIEWS

NEURASTHENIA AND NEUROSES (NEURASTHÉNIE ET NÉVROSES). LEUR GUÉRISON DÉFINITIVE EN CURE LIBRE. Paris, Alcan, 1909. *By P. E. Levy.*

DISCUSSION ON THE PATHOGENESIS OF NEURASTHENIC STATES (DISCUSSION SUR LA PATHOGENIE DES ETATS NEURASTHÉNIQUE). *By P. E. Levy.*

USELESSNESS OF ISOLATION IN NEURASTHENIA AND NEUROSES. (INUTILITE DE L'ISOLEMENT DANS LA NEURASTHÉNIE ET LES NÉVROSES. SUPERIORITÉ DE LA CURE LIBRE.) KUNDIG, GENEVA, 1909. *By P. E. Levy.*

If the contentions which Levy expounds in these works can be corroborated, they mark a stage in the development of therapeutic power over the psychoneuroses.

His ideas are founded upon the biological unity of the organism, a point of view very different to the pseudo-monism of Dubois, which is in reality animistic. Upon what he calls a " unicist " conception. Levy founds a psychotherapeusis which dispenses with the disadvantages of isolation, prolonged rest, and superalimentation.

To illustrate the unicism of the organism, he instances spermatorrhœa, which he believes to be always due to an erotic dream. His reasoning, however, is largely *a priori*. There is a striking resemblance in all this to the association-neurosis which has been so much more clearly and concretely described by Donley, following Morton Prince.

Upon this notion he founds his therapeusis, which at bottom does not differ from that of the sound commonsense employed by the classical physicians, except that Levy explains to the patient the psychological effect of the medicines prescribed.

The success of his treatment is a further proof that no special validity need be attached to the more formal methods of psychotherapeusis, such as hypnotism, hypnoidization, distraction, conversion, substitution, etc. Even the psycho-analysis preliminary to successful treatment can be performed with the patient fully conscious, by the stimulus of urging, which its foremost exponent, Freud, now himself adopts. Levy rightly insists upon the auto-therapeusis needed for permanent cure.

As preventive of recurrences, he lays much stress upon the periodic depressions due to prolonged psychic exaltation. To prevent these, as well as to treat actual neurotic symptoms, he relies largely upon re-educating the patients into healthy habits.

He believes that the sensibility is the bond between the somatic and the psychic; and that it is impossible to abstract the sensation of pain from its accompaniments of apprehension, of fear, and of psychic discomfort, which he regards as part of the pain. He supports this opinion by the description of the cure of two cases of neuralgia. To the reviewer these are susceptible of a different interpretation; but they at least show the possibilities of persuasion into effort apart from hypnosis, distraction, or other artifice in developing disregardfulness of annoying symptoms even though non-psychogenic. It is to be doubted if Levy's intervention had much to do with the recovery of these patients' disease itself, although it abrogated its inconvenient effects. In judicious hands, the method has its place; but its application by the ignorant is daily illustrated in the annals of Christian Science and other lay practice.

Levy is absolutely opposed to isolation, for he finds that solitude simply intensifies most neurotic states. The real kernel of truth in the method of isolation has been lost by most practitioners. Isolation should not be a physical removal from environment, but should be interpreted as a moral subtraction of fears, preoccupations, obsession, morbid ideas. Even separation from one's usual surroundings is rather a hindrance than an advantage for a real cure in a great majority of cases. Doctors who believe the contrary are imposed upon by the deceptive " seriousness " of the psycho-neuroses. As to the friends, a firm diplomacy will enable the physician in a few days to convert them from hindrances to valuable helps for upbuilding the *morale* of the patient. It is to the neglect of this *psychotherapie de l'entourage* that Levy attributes the failure of others in the home treatment of psycho-neuroses. Forewarned is forearmed.

The reviewer is sceptical as to the applicability of this method in the United States, at least among the class of people who form the major part of the patients for whom in the past a " rest cure " has been imposed. Amenability to sound medical psychology may be characteristic of the female relatives of Parisian patients; but in this land of popular psychology I do not think that many of us can count much upon the co-operation of the patient's friends, who are usually the greatest obstacle to successful treatment.

Levy contends that even the opportunity for persuasion, which to many has been the main justification of isolation, since physicians realized the perniciousness of solitude itself to most neurotics, is

fallacious, and that persuasion and reasoning are of little avail to the patient unless he is given a chance to apply the conclusions he reaches.

The intimidation which is often used during the patient's removal from her usual surroundings is most harmful, except in a few special cases.

But the main argument he brings against isolation is that any re-education conducted then is a mere hothouse growth, which fades and withers as soon as the patient has to face the acts of life. Re-education worth the name must be training in the acts of life by development of the patient's own will. Submission to the will of a physician, however wise, only perpetuates the aboulia of the neurotic. One might as well learn to swim on a couch. The patient must learn to do what his life requires; and he can only so do by doing.

Hence, Levy contends that the true therapy of the mal-adjustments of psychoneurotics is a readjustment, which can only be performed while they are at liberty so that they can practice the readjustments in which they are instructed and encouraged by the psychotherapeutist, whose sole function is to regulate the stresses in accordance with the patient's capability to resist and will. It is a moral gymnastic, the appliances for which are best found in the conditions of life as it is.

Levy is most insistent upon a complete enlightenment of the patient as to his exact bodily and mental status; it is only in this way that he can accommodate his powers and husband them for the tasks which face him. The modern method of enlightening a tubercular is strictly comparable. He is most careful to avoid the over-enthusiasm of moral uplift which would push a patient to efforts certain to cause physical breakdown. If this requires insistance in France, how much more must it be emphasized in this country of rampant laic assumption of the therapeutics of the mind?

He calls Weir Mitchell's method "isolation with negative moral treatment." (We wonder what Dr. Mitchell would say to this!) Dubois's method he calls "isolation with positive moral treatment." His own method he calls a "cure by adaptation to the environment." It might be compared to the orthopædics of flatfoot by gymnastics, of metabolic lethargy by athletic tasks, of asthenic adiposity by graduated exercises, of pulmonary phthisis by the stimulus of graded work, a progressive hardening. It is a treatment of courage, as against one of cowardice.

Besides, a doctor cannot even duly appreciate the patient's weaknesses while she is isolated from a chance to show them.

Levy does not lay down before his patients a rigid line of conduct, as has been the fashion. He places no stress upon details. The principles are made thoroughly clear to the patient, who then learns to apply them with his own intelligence and will, discussing and rectifying them with the doctor. He really learns to treat himself, which is the only guarantee of a permanent cure; for his mistakes are a better source of knowledge than the didactics of the wisest of friends.

The patient then learns that his own power to resist is more important than the symptoms of his disease, and learns to judge these latter at their true value. The cure is effected.

TOM A. WILLIAMS

BOOKS RECEIVED

ATTENTION AND INTEREST, A STUDY IN PSYCHOLOGY AND EDUCATION. *By Felix Arnold, Ph.D.* New York, The Macmillan Company, 1910. Pp. 269. $1.00.

PSYCHIC CONTROL THROUGH SELF-KNOWLEDGE. *By Walter Winston Kenilworth.* New York, R. F. Fenno & Company, 1910. Pp. 341.

LA VIE MENTALE DE L'ADOLESCENT ET SES ANOMALIES. *By Aug. Lemaître.* Saint-Blaise, Suisse, 1910. Pp. 238.

INFANCY, (*Edited by T. N. Kelynack, M.D.*) IN NATIONAL HEALTH MANUALS, LONDON, 1910. Pp. 186. One shilling.

EPIDEMIC POLIOMYELITIS. REPORT OF THE COLLECTIVE INVESTIGATION COMMITTEE ON THE NEW YORK EPIDEMIC OF 1907. NERVOUS-MENTAL DISEASE, MONOGRAPH SERIES, NO. 6. New York, 1910. Pp. 119.

THE METAPHYSICS OF THE NATURE AND IN THE CONCEPTION OF THE SOUL.— IT'S HABITAT? *By Joseph Clements, M.D.* Boston. The Roxburgh Publishing Company (Inc.), 1909. Pp. 112.

A FIRST BOOK IN PSYCHOLOGY. *By Mary Whiton Calkins,* Professor of Philosophy and Psychology in Wellesley College. New York. The Macmillan Company, 1910. Pp. xvi + 419. Price $1.90 net.